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TITLE: ULTRASONIC SWITCH

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ABSTRACT:

PURPOSE: To enable the detection of an object to be detected at a short distance, by driving a switching element at the time of the end of a transmission period of an ultrasonic vibrator, so as to damp reverberation vibrations of transmission waves caused by the ultrasonic vibrator.

CONSTITUTION: An ultrasonic vibrator 1 driven by a drive circuit 2 oscillates an ultrasonic wave, while receiving a reflected wave from an object 3 to be detected. A transmission-reception switching circuit 7 switches over a reception circuit 4 and the drive circuit 2 periodically. A series circuit of a switching element 10 composed of a resistor having a relatively low resistance value and a transistor is connected in parallel with the ultrasonic vibrator 1, and it is driven by the transmission-reception switching circuit 7. The switching element 10 is driven at the time of the end of the transmission

period of the ultrasonic vibrator 1, so as to damp the reverberation vibrations of transmission waves caused by the ultrasonic vibrator 1. Thereby reception waves are prevented from dissipating together with the reverberation vibrations of the transmission waves even when a distance to the object 3 to be detected is short.

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